

In the Claims

The claims have been amended as follows:

1. (currently amended) An apparatus for low-pressure wire bonding of an integrated circuit chip to a substrate, said apparatus comprising:

a metallic wire material;

a metallic interconnect within said substrate;

an alloying metal deposited on said metallic interconnect, said alloying metal comprising alloying metals other than said metallic wire material; and

an a resultant alloy material formed between said interconnect and a metallic wire connected to said integrated circuit chip, said resultant alloy material including a composition of said metallic wire material and an said alloying metal, and formed when said metallic wire is in contact with said metallic interconnect under temperature, pressure, and energy lower than that required for bonds that are not exposed to said alloy material.

2. (original) The apparatus of claim 1 wherein said metallic interconnect includes copper.

3. (currently amended) The apparatus of claim 1 wherein said resultant alloy material comprises a low melting temperature material including Au-Sn or Au-In, and wherein said Au is originates from, and is deposited by, said metallic wire.

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4. (original) The apparatus of claim 3 wherein a concentration of said Sn of said alloy material is used to vary said alloy material's melting point to be greater than that of said alloying metal.

5. (original) The apparatus of claim 1 wherein said metallic wire is comprised of gold.

6-20. Cancelled.